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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,429	06/24/2003	Sridhar Sadasivan	01333	9648

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EXAMINER

CLEVELAND, MICHAEL B

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,429

Applicant(s)

SADASIVAN ET AL.

Examiner

Michael Cleveland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35, 42 and 43 is/are pending in the application.
- 4a) Of the above claim(s) 22-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21, 42-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/12/2005 has been entered.

Election/Restrictions

2. Claims 22-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 6/28/2004.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-21 and 42-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no disclosure of the claimed process for inorganic electroluminescent materials, as embraced by the claims by removing "organic" throughout independent claims 1 and 15.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 2-14 and 16-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-14 and 16-21 recite the limitation "the organic material", "the first organic material", and "the second organic material" throughout the claims. There is insufficient antecedent basis for this limitation in the claim because of Applicant's amendments to the parent claims. For the purposes of applying art, the claim has been interpreted as referring to "the electroluminescent material", "the first electroluminescent material", and "the second electroluminescent material", respectively.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-9, 11, 13-21, and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jagannathan et al. (U.S. Patent 6,471,327, hereafter '327) in view of Miyashita et al. (U.S. Patent Application Publication 2001/0001050, hereafter '050).

Claims 1, 13, 14, 38-41: '327 teaches a method for forming a layer of an electroluminescent (EL) material (col. 4, lines 3-14) comprising the steps of:

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providing a substrate (14);

controllably depositing an organic material (col. 9, lines 48-55) over the substrate in a first location and a distinct second location (to form a patterned high resolution image (col. 1, lines 19-32; Fig. 3D),

wherein the organic material becomes free of the compressed fluid solvent prior to reaching the substrate (col. 10, lines 10-30).

'327 does not explicitly teach that the EL material is deposited on a first addressing electrode on the substrate and covered with a second addressing electrode on the EL material. However, the selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See MPEP 2144.07. '327 does not teach how to make an EL device. The Examiner takes Official Notice that EL devices are typically constructed by depositing a first addressing electrode on a substrate, depositing the EL material on the first electrode, and depositing a second addressing electrode on the EL material. For instance, '050 teaches that organic EL devices may be constructed by depositing a first addressing electrode (801, 802, 803) on a substrate, depositing the EL material (806, 807, 808) on the addressing electrode and depositing a second electrode (813) on the EL material. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the EL device of '327 by depositing a first addressing electrode on a substrate, depositing its EL material on the first electrode, and depositing a second addressing electrode on the EL material with a reasonable expectation of success because '050 teaches that such is a suitable method of making an EL device.

'327 does not explicitly teach that the organic material is contained under a first condition having a first spectral peak before depositing on the first electrode and that the same material is contained under a second condition so that it has a different spectral peak before depositing it in the second location. However, the Examiner takes Official Notice 1) that color screens are very well known in the art, see, e.g., '050, [0049] and 2) that the use of a common host material with different dopants to produce the different colors is known in the art, see, e.g., [0071], [0075-0082]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the

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invention was made to have stored the same material under different conditions, such as different dopants, in order to have provided a color device.

Claims 2-7 and 19-21: The first and second conditions must have temperatures and pressures. Likewise, the evaporation must occur at a temperature and pressure.

Claim 8: The organic material may be printed in at least three distinct locations (Fig. 3D) using three distinct dye. Furthermore, a color screen comprises thousands of pixels of each color in distinct locations.

Claims 9 and 11: '050 teaches that a mask (825) may be positioned over the electrode prior to deposition (Fig. 4).

Claim 15-16, 37, 39-41: '050 also teaches that different organic EL materials may be deposited [0076-0078] to form a color EL device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have repeated the method of '327 to form each of the three EL layers with a reasonable expectation of success because '327 teaches that its method is suitable for depositing EL materials.

Claims 17-18: Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have mixed each material by the procedure of col. 9, lines 16-35 (i.e., varying the condition of each mixture before depositing it).

Claim 42-43: The material of '327 is nanomorphous (col. 10, lines 3-5).

10. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jagannathan '327 in view of Miyashita '050 as applied to claim 1 above, and further in view of Yamazaki et al. (U.S. Patent 6,420,834, hereafter '834).

'327 and '050 are discussed above, but do not explicitly teach that the organic material and substrate are oppositely charged. However, '834 teaches that the area of deposition of an organic electroluminescent material may be controlled by charging the organic material and oppositely charging the substrate to attract the material to the areas of the substrate that are so charged (col. 5, lines 20-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have deposited the material of '327 by charging it and oppositely charging the substrate in order to have controlled the area of deposition on the substrate.

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Response to Arguments

11. Applicant's arguments filed 7/15/2005 have been fully considered but they are not persuasive.

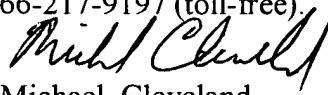
Applicant argues that Miyashita does not disclose manufacturing a multi-color display using one electroluminescent material because fluorescent dyes are added to the material. The argument is unconvincing because the claims use of the broad terminology "a first condition" and "a [distinct] second condition" to cause "a first reflected spectral peak" and "a second reflected spectral peak" is open to the first condition because the presence of a first fluorescent dye and the second condition because the presence of a second fluorescent dye that therefore causes the reflected color of the electroluminescent material to be different.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cleveland whose telephone number is (571) 272-1418. The examiner can normally be reached on Monday-Thursday, 7-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Michael Cleveland
Primary Examiner
Art Unit 1762